



**Department of Energy**

Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

July 14, 2004



Mr. Steve Zappe, Project Leader  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, New Mexico 87505-6303

Subject: Transmittal of the revised Re-Certification Audit Report for the Rocky Flats  
Environmental Technology Site (A-04-10)

Dear Mr. Zappe:

This letter transmits the revised final audit report and B6 checklists for the Carlsbad Field Office (CBFO) Audit A-04-10 of the Rocky Flats Environmental Technology Site (RFETS). The revised final audit report and B6 checklists address the issues identified in a letter from the New Mexico Environment Department (NMED) dated July 6, 2004. Also enclosed with this letter are the responses to the comments contained in the attachment to the letter.

Please contact the CBFO Quality Assurance Manager, Ava L. Holland, at (505) 234-7423 should you have any questions concerning this revised final audit report.

Sincerely,

R. Paul Detwiler  
Acting Manager

Enclosure



Mr. Steve Zappe

-2-

July 14, 2004

cc: w/o enclosure

A. Holland, CBFO	*ED
D. Miehl, CBFO	*ED
K. Watson, CBFO	*ED
R. Knerr, CBFO	*ED
J. Legare, RFPO	*ED
J. Kielling, NMED	*ED
S. Martin, NMED	*ED
S. Warren, WTS	*ED
L. Greene, WRES	*ED
S. Harrison, CTAC	*ED
L. Xuan, RFPO	*ED
R. Ballenger, RFETS	*ED
C. Ferrera, RFETS	*ED
G. O'Leary, RFETS	*ED

cc: w/enclosure

WTS Operating Record, MS486-06

C. Walker, TechLaw

CBFO QA File

CBFO M&RC

**NMED COMMENTS AND THE CBFO RESPONSES TO THE COMMENTS ON  
THE ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE (RFETS)  
FINAL AUDIT REPORT A-04-10**

The following contains the CBFO responses to each of the NMED comments on the Rocky Flats Environmental Technology Site (RFETS) Final Audit Report A-04-10.

1. Question 1 lists procedure PRO-484-WIPP-003, Sections 6.1 and 6.2. NMED believes that adding Section 3 (definitions) would clarify the cited sections.

*Response:*

*Added Section 3 (definitions) to provide clarity.*

2. Question 7 lists procedure PRO-484-WIPP-003, Section 6.1. The cited reference is correct, but NMED believes that listing where the definitions are located would further clarify the answer.

*Response:*

*Added 95-QAPjP-0050, Section B (Waste Analysis Plan) to provide further clarity.*

3. Questions 48, 63, 66, 67, 68, 69, and 71 list procedure PRO-077-WIPP-005 Section 5.4.1[9]. The cited procedure is not included with the report.

*Response:*

*Added to list of 'RFETS Documents Audited for A-04-10' and included with resubmittal of Final Audit Report.*

4. Question 50 lists procedure 1-MAN-039-WEM-WP-1200. The cited procedure is not included with the report.

*Response:*

*Added to list of 'RFETS Documents Audited for A-04-10' and included with resubmittal of Final Audit Report.*

5. Question 56b lists procedure H-G83-WEMS-1209. The cited procedure is not included with the report.

*Response:*

*Corrected procedure number to 4-G83-WEMS-1209, added to list of 'RFETS Documents Audited for A-04-10' and included with resubmittal of Final Audit Report.*

6. Questions 66, 68, and 69 list procedure 1-V41-RM-001. The cited procedure is not included with the report.

*Response:*

*Added 'Chapter 9' to question 66. Added to list of 'RFETS Documents Audited for A-04-10' and included with re-submittal of Final Audit Report.*

7. Questions 72 and 73 list procedures PRO-X05-WC-4018 and PRO-T43-Traffic-528. The cited procedures are not included with the report.

*Response:*

*Added to list of 'RFETS Documents Audited for A-04-10' and included with resubmittal of Final Audit Report.*

8. Questions 114, 115, 117, and 124 list procedure L-4028. The cited procedure is not included with the report.

*Response:*

*Added to list of 'RFETS Documents Audited for A-04-10' and included with resubmittal of Final Audit Report.*

9. Question 122 lists procedures PRO-1585-PWS-440 Section 7[10] and PRO-1623-SCWS-440 Section 7[11]. The cited sections are correct, but for PRO-1585-PWS-440, NMED suggests adding Section 7[6] along with Section 6.2[25] Note, [26], [37] and [38], and for PRO-1623-SCWS-440 adding Section 7[6] along with Section 6.2[13] and [23] to further clarify the answer.

*Response:*

*Added suggested Sections to question 122.*

10. Question 147 lists 95-QAPjP-0050 Section B4-2c. NMED believes that adding Section B4-2b further clarifies the answer.

*Response:*

*Added Section B4-2b to provide further clarity.*

11. Question 151 lists procedure H19-WSRIC-001. The cited procedure does not exist. Do the Permittees mean 4-H19-WSRIC-001?

*Response:*

*The correct procedure is 4-H19-WSRIC-001, question 151 corrected.*

12. Question 220 E. lists procedure PRO-1669-HGAS-V&V Section 6.1.26.1.4. The cited section does not exist.

*Response:*

*The correct reference is Section 6.1.4. Question 220 E. has been corrected.*

13. Question 245 lists procedure PRO-1520-Mobile-RTR Section 7.2[42]. Do the Permittees mean Section 7.1[42]?

*Response:*

*Yes! Question 245 has been corrected.*

14. Question 300 lists procedure PRO-1358-440-VERP Section 5.6. Although the citation is correct for part of the question, it does not fully answer the question.

*Response:*

*Added a reference to 95-QAPjP-0050, SB1-3b(5) to question 300 to provide further clarification..*

U.S. DEPARTMENT OF ENERGY  
CARLSBAD FIELD OFFICE

REVISED FINAL AUDIT REPORT

OF THE

ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE

GOLDEN, COLORADO

AUDIT NUMBER A-04-10

March 30 – April 2, 2004

FINAL AUDIT REPORT OF WASTE CHARACTERIZATION IN  
ACCORDANCE WITH THE HAZARDOUS WASTE FACILITY PERMIT



Prepared by: Charles L. Riggs  
Charles L. Riggs, CTAC  
Audit Team Leader

Date: 7/9/04

Approved by: Ava L. Holland  
Ava L. Holland, CBFO  
Quality Assurance Manager

Date: 7/14/04

## **1.0 EXECUTIVE SUMMARY**

Carlsbad Field Office (CBFO) Audit A-04-10 was conducted to evaluate the continued adequacy, implementation, and effectiveness of the Rocky Flats Environmental Technology Site (RFETS) transuranic (TRU) waste characterization activities for debris and solid waste relative to the requirements detailed in the Waste Isolation Pilot Plant (WIPP) Hazardous Waste Facility Permit (HWFP).

The scope of the audit included Summary Category Group S5000 debris waste (in particular, retrievably stored and repackaged debris waste) and Summary Category Group S3000 homogeneous solids waste. The audit team also evaluated RFETS activities associated with the characterization of Summary Category Group S4000, Soils and Gravel (**new**). RFETS is the first site to be evaluated for this group.

The audit was conducted at the RFETS facility from March 30 – April 2, 2004. The audit team concluded that the adequacy of the RFETS technical and Quality Assurance (QA) programs, as applicable to audited activities, was satisfactory in meeting requirements contained in the HWFP. The audit team also concluded that the defined QA and technical processes for the audited activities were being implemented in accordance with the RFETS Quality Assurance Project Plan (QAPjP) and the implementing procedures. In addition, it was concluded that the processes were effective.

The audit team did not identify any conditions adverse to quality resulting in the issuance of a corrective action report (CAR).

Two deficiencies, isolated in nature and requiring only remedial corrective action, were corrected during the audit (CDA). One Observation and one Recommendation were also identified. The CDAs, Observation, and Recommendation are described in Sections 6.0 and 7.0.

## **2.0 SCOPE AND PURPOSE**

### **2.1 Scope**

The audit team evaluated the adequacy, implementation, and effectiveness of the RFETS TRU waste characterization processes for debris and homogeneous solid waste relative to the requirements contained in the HWFP, Attachments B through B6. Continued compliance was documented by completing the Attachment B6 checklist for the applicable RFETS activities. The audit team also evaluated RFETS activities associated with the characterization of Summary Category Group S4000, Soils and Gravel (**new**).

The following RFETS program elements were evaluated in accordance with the HWFP:

General

Results of Previous Audits  
Changes in Programs or Operations  
New Programs or Activities Being Implemented  
Changes in Key Personnel

Quality

Nonconformance/Corrective Action  
Personnel Qualification and Training  
Documents and Records  
Sample Control

Technical

Soils/Solids Sampling and Analysis  
Acceptable Knowledge (AK)  
Headspace Gas Sampling and Analysis  
Real-Time Radiography (RTR)  
Visual Examination (VE)  
Data Generation-Level Verification and Validation  
Project-Level Verification and Validation and WWIS Data Entry

The evaluation of RFETS TRU waste activities and documents was based on current revisions of the following documents:

*Hazardous Waste Facility Permit Waste Isolation Pilot Plant EPA No.  
NM4890139088, New Mexico Environment Department*

*CBFO Quality Assurance Program Document, DOE/CBFO-94-1012*

*RFETS Quality Assurance Project Plan for the Transuranic Waste Characterization  
Program, 95-QAPjP-0050*

*RFETS Transuranic Waste Management Manual, 1-MAN-008-WM-001*

Related RFETS technical and quality assurance implementing procedures

## **2.2 Purpose**

Audit A-04-10 was conducted to assess the continued compliance of RFETS debris and homogeneous solids waste characterization and certification activities with HWFP requirements. The audit team also evaluated RFETS activities associated with the characterization of Summary Category Group S4000, Soils and Gravel (**new**).



### **3.0 AUDIT TEAM AND OBSERVERS**

#### **AUDITORS/TECHNICAL SPECIALISTS**

Charlie Riggs	Audit Team Leader, CBFO Technical Assistance Contractor (CTAC)
Tommy Putnam	Auditor, CTAC
Annabelle Axinn	Auditor, CTAC
Porf Martinez	Auditor, CTAC
Norm Frank	Auditor, CTAC
Pete Rodriguez	Auditor, CTAC
Jim Schuetz	Auditor, CTAC
Prissy Dugger	Auditor, CTAC
Wayne Ledford	Auditor/Technical Specialist, CTAC
Dee Scott	Auditor/Technical Specialist, CTAC
Dick Blauvelt	Technical Specialist, CTAC
Patrick Kelly	Technical Specialist, CTAC

#### **OBSERVERS**

Steve Holmes	New Mexico Environment Department (NMED)
Kevin Krause	NMED
Carl Chavez	NMED
Connie Walker	NMED Contractor
Scott Webb	Environmental Evaluation Group (EEG)

### **4.0 AUDIT PARTICIPANTS**

RFETS individuals contacted during the audit process are identified in Attachment 1. A pre-audit meeting was held at RFETS Building 115 on March 30, 2004. Daily meetings were held with RFETS management and staff to discuss the previous day's issues and potential deficiencies. The audit was concluded with a post-audit meeting held at RFETS Building 115 on April 2, 2004.

### **5.0 SUMMARY OF AUDIT RESULTS**

#### **5.1 Program Adequacy and Implementation**

This audit was performed to assess the ability of RFETS to characterize waste from Summary Category Groups S3000, S4000, and S5000 to the requirements specified in the WIPP Waste Analysis Plan (WAP). The characterization methods assessed were headspace gas (HSG) sampling, HSG analysis, acceptable knowledge (AK), radiography, visual examination (VE), VE technique (VET) (also referred to as visual verification (VV or V<sup>2</sup>) at RFETS), repackaging activities, and soils/solids sampling and analysis. Also assessed were data review and validation, and the use of resulting information to perform data quality objective (DQO) reconciliation and prepare a Waste Stream Profile Form (WSPF).

The audit team concluded that the applicable RFETS TRU waste characterization activities, as described in the associated RFETS implementing procedures, are satisfactory in meeting the requirements of the HWFP. The deficiencies identified in Section 6.2 have been corrected. The supporting documentation for the closure of the CDAs is contained in Attachment 2. Details of audit activities, including specific objective evidence reviewed, are described below and in the attached B6 checklist. The B6 checklist identifies the RFETS program documents and procedures where the WAP requirements are met. Attachment 3 contains examples of the objective evidence reviewed during the audit.

## **5.2 Technical Activities**

Each technical area audited is discussed in detail in the following sections. The method used to select objective evidence is discussed, the objective evidence used to assess compliance with the WAP is cited briefly (and in detail on the checklist), and the result of the assessment is provided.

Each checklist question that could not be satisfactorily answered resulted in an audit deficiency. Deficiencies that were corrected during the audit are discussed in Section 6.2. Each CDA deficiency is identified on the B6 checklist tables under the corresponding item number.

### **5.2.1 Table B6-1 WAP Checklist**

The B6-1 WAP checklist addresses program requirements from an overall management perspective. It documents the verification that the waste characterization strategy, as defined in the WAP, is implemented by using controlled procedures. This audit was performed to assess RFETS' continued ability to characterize Summary Category Group S3000 homogeneous solids waste streams and S5000 debris waste streams.

This audit also was the initial evaluation for Summary Category Group S4000 soils and gravels (**new**).

Objective evidence to evaluate the implementation of the associated characterization activities was selected and reviewed. Batch data reports, sampling records, and training documentation for TRU Waste Characterization Program (TWCP) personnel were included in the evaluation. The audit included direct observation of and/or a demonstrated walk-through of actual waste characterization activities (such as gas sampling, RTR, and WIPP Waste Information System [WWIS] data entry). Each characterization process involves:

- Collecting raw data
- Collecting quality assurance/quality control (QA/QC) samples or information
- Reducing the data to a useable format, including a standard report
- Review of the report by the data generation facility and the site project office
- Comparing the data against program DQOs
- Reporting the final waste characterization information to WIPP

The flow of data from the point of generation to inclusion in the WSPF for each characterization technique was reviewed to ensure that all applicable requirements were captured in the site operating procedures. The material in this section of the checklist is also addressed in more detail in subsequent checklist sections, where the specific procedures audited and the objective evidence reviewed are identified.

RFETS demonstrated compliance with the characterization requirements of the WAP through documentation and by demonstrating the characterization activities. The project-level data verification and validation process was evaluated by reviewing the following batch data reports:

VV 371-00096  
RTR 6T-2092  
HGAS-DP-00547  
371TGS-DP-050103

AK and the auditable record were reviewed in detail for Summary Category Groups S3000, S4000, and S5000 waste streams. The AK record was reviewed to demonstrate that the required information was present and correctly interpreted. The batch data reports cited above were used to demonstrate confirmation of AK, reconcile DQOs, prepare WSPFs, and transmit data to WIPP using the WWIS.

Visual Examination Technique (VET), referred to as Visual Verification (VV or V<sup>2</sup>) at RFETS, was evaluated by the audit team. All the containers examined in this manner were considered as being initially packed. The containers were being packed in accordance with procedure PRO-1031-WIPP-1112, *TRU/TRM Waste Visual Verification (V<sup>2</sup>) and Data Review*.

During the review of batch data report VV-991-00001, it was noted that two Pu/Be sealed sources had been packaged in a standard waste box (SWB). The shielding calculation relied on the bracing in the SWB to maintain the sources centered in the SWB at a surface dose rate below 200mR/hr. Relying on the bracing is not allowed by the TRAMPAC. The RFETS issued a nonconformance report (NCR) on this container (see CDA #1).

The audit team concluded that the VET process at RFETS is satisfactorily implemented and effective.

The audit team reviewed WSPF RF134.02 and the summarized characterization information related to it to establish the objective evidence for reporting waste characterization information to WIPP. The form was completed using information from characterization processes. As required, actual WSPFs were prepared and submitted to CBFO prior to waste shipment. The forms were reviewed and approved by CBFO when the waste streams had been fully characterized and the site was approved to ship waste.

### 5.2.2 Table B6-2 Solids and Soils/Gravel Sampling Checklist

This audit was performed to assess RFETS' ability to characterize Summary Category Groups S3000, S4000, and S5000 waste streams.

The audit team examined the soils/solids sampling capabilities for waste characterization performed at RFETS. Sampling operations are being performed and documented as required by the WAP. The audit team evaluated polymerized waste sampling, small container sampling, and the grid method of sampling. Sample collection, custody documentation, and sample packaging for shipment to the analytical laboratory were reviewed. Review of the data indicated that the documentation is correct and contains the required information. The overall soils/solids sampling procedures were determined to be adequate. The audit team determined that the soils/solid sampling process is satisfactorily implemented and effective.

The process for sample handling at the Analytical Chemistry Laboratory (ACL) was evaluated. The evaluation established that sample handling at this facility was performed in accordance with procedures. The samples were stored correctly after collection and receipt and were correctly tracked as they moved through the collection and analysis processes. It was concluded that the sample handling procedures were adequate and satisfactorily implemented and the process was effective. The chain-of-custody process at the ACL was examined for samples that came to the laboratory facility. The overall chain-of-custody program and procedures were determined to be adequate and satisfactorily implemented and the process was effective.

The activities being implemented to comply with specific container selection, sampling, examination, and data analysis requirements for transuranic waste were reviewed. The procedures that address these activities were determined to be adequate and satisfactorily implemented and the process is effective.

The audit team reviewed the process for total metals analysis. The activities were well executed and the personnel interviewed were knowledgeable, professional, and well trained. No concerns were identified for metals determination. The procedures were determined to be adequate and the analytical process was satisfactorily implemented and effective.

The audit team examined the procedures and processes relating to volatile organic compound (VOC) analysis of soils/solid samples. The audit included a review of laboratory notebooks and sample preparation, and the audit team evaluated the analytical processes. One solids data package for VOC analyses was reviewed in depth and found to be accurate and complete. Procedures used to control the processes were determined to be adequate in meeting the requirements of the WAP. The processes for analysis of VOCs were determined to be satisfactorily implemented and effective.

The audit team evaluated the procedures and processes for semivolatile organic compound (SVOC) analysis of soils/solid samples. The audit team conducted

interviews and reviewed soils/solids data packages for SVOC analyses in depth and found them to be accurate and complete and in accordance with requirements.

No conditions adverse to quality were noted in this area during the audit. No CDAs, Observations, or Recommendations resulted from this area of the audit.

Procedures used to control the processes were determined to be adequate when compared to the requirements of the WAP. The processes for analysis of SVOCs were determined to be satisfactorily implemented and effective.

The RFETS ACL received its last sample in December 2003. The ACL has completed all of its analyses and is being readied for decommissioning and dismantling. All future samples will be sent to the laboratory at INEEL or another WIPP-approved off-site laboratory.

### 5.2.3 Table B6-3 Acceptable Knowledge Checklist

This audit was performed to assess the ability of RFETS to characterize Summary Category Groups S3000, S4000, and S5000 waste streams. Items on the AK checklist are intended to ensure that RFETS has an AK process in place to:

- Train personnel in AK data collection requirements
- Assemble AK data into a coherent narrative detailing waste generation and constituents
- Segregate waste into like waste streams
- Provide Resource Conservation and Recovery Act (RCRA) characterization for the waste streams
- Confirm RCRA characterizations using sampling and analysis
- Provide an auditable set of records to support the characterization

The AK summary documentation contained in the auditable record and container-specific information were reviewed. Traceability of the AK documentation was established by selecting a random sample of reference documents. The summary document and supporting documentation identifies the waste stream and point of generation for the containers. Several of the references were selected to ensure they are available in the auditable record and to see if the source documents support the characterization determination. These sources include such items as published reports, process flow diagrams, interviews with site personnel concerning use of hazardous materials, and reports of previous waste characterization sampling and analysis efforts. Some discrepancies were identified in the AK source documents reviewed. RFETS staff prepared a discrepancy resolution memo and this concern was corrected during the audit (CDA #2).

The AK process was evaluated by reviewing the AK summary for the subject waste stream in RMRS-WIPP-98-100, *Acceptable Knowledge TRU/TRM Waste Stream Summaries*, and RF/RMRS-97-018, *RF/RMRS Acceptable Knowledge Supplemental Information*. The auditable record was searched to ensure that the cited references

were available and that the reviewer could come to the same hazardous waste determination as presented in the AK summary. Several drums were selected and the AK information for each was traced from the summary to the point of generation.

The AK process includes provisions to identify information that conflicts with what is expected in a waste stream (confirmation processes) and a method by which these conflicts can be resolved (reconciliation). The discrepancy resolution procedures are PRO-484-WIPP-003, *Collection, Review, and Confirmation of Acceptable Knowledge Documentation*, and 4-H19-WSRIC-001, *WSRIC Characterization and Reverification*. Reassessments for several drums were reviewed (Documents MLJ-025-2004, BCF WF24-023-2002, WF29-004-2004, and RF061898ROB173) (see Attachment 3).

RFETS has an extensive process for collecting waste characterization information. Each waste-generating process in each building is described in detail in the waste stream residue identification and characterization (WSRIC) Building Books. All material inputs to a process are listed, the output products are identified, and the wastes generated are discussed in detail. RFETS Procedures PRO-484-WIPP-003 and 4-H19-WSRIC-001 provide for the comprehensive segregation of waste into discrete waste streams. The Building Books contain a readily accessible store of documentation to allow the site to investigate waste generation processes for all of the waste streams that RFETS expects to eventually certify for disposal at WIPP.

The AK checklist was completed, in part, by reviewing two documents: RMRS-WIPP-98-100, *Acceptable Knowledge TRU/TRM Waste Stream Summaries*, and RF/RMRS-97-018, *RF/RMRS Acceptable Knowledge Supplemental Information*. Additional supporting documentation such as the AK Accuracy Report, container reassessment memos, and the AK source document review summaries, are contained in Attachment 3 to support the entries in Table B6-3.

RFETS WSPF RF102.01 for TRU (Metals) Heterogeneous Debris Waste, RF141.02 for Transuranic Mixed (TRM) Low-Grade Oxides, and RF134.02 TRU Soils (blacktop/concrete/dirt/sand), and the information related to them, were reviewed to establish the objective evidence for reporting characterization information to WIPP. Procedure PRO-944-WIPP-008, *Completion of Waste Stream Profile Form for Waste to be Disposed of at WIPP*, was evaluated during the audit.

The procedures cited above, which are used by the site to assemble, evaluate, document, and reconcile sampling and analysis results, were reviewed for adequacy, and their implementation was assessed during the audit. The AK requirements include the procedure content and specific requirements to ensure that the AK summary includes all mandatory information required by the WAP.

Reports and records used to document the basis of RFETS AK were evaluated during the audit. Attachment 3 contains copies of pages used as objective evidence. The reports were found to be satisfactory and the records are being properly maintained as QA records. The AK documentation reviewed is listed in Attachment 3.

The audit team concluded that RFETS was satisfactorily using sampling and analysis data to confirm the waste characterization designations made using AK. RFETS has an adequate process in place to resolve discrepancies and document changes. Waste characterization designations were confirmed by reviewing the batch data reports documenting the characterization activities. If the characterization results are not supported by the AK waste stream description, an NCR is prepared. HSG confirmation is performed at the site project level during preparation of the WSPF. The site is making conservative assignments of hazardous waste designations.

One condition adverse to quality was noted in this area during the audit, resulting in a CDA (CDA #2). The audit resulted in one Observation (see Section 7.1, Observation 1) and one Recommendation was presented to RFETS management (see Section 7.2, Recommendation 1).

The audit team concluded that RFETS is satisfactorily implementing the AK process to delineate, characterize, and confirm the characterization of waste for disposal in accordance with WIPP WAP requirements and the process is satisfactorily implemented and effective.

#### 5.2.4 Table B6-4 Headspace Gas Checklist

This audit was performed to assess the ability of RFETS to characterize Summary Category Groups S3000, S4000, and S5000 waste streams. HSG sampling and analysis operations at RFETS were evaluated by observations, walk-through demonstrations, interviews, and review of documentation.

Since the last CBFO recertification audit (A-03-03), HSG Sampling and Analysis operations have been centralized in Building 440 using the Los Alamos National Laboratory (LANL) HSG sampling and analysis manifold units.

A walk-through of the existing units in Building 440 was performed on March 30, 2004. HSG sampling and analysis using the online method was demonstrated to the audit team. Two data packages were examined for work performed in Building 440 (HGAS-DP-00872 and HGAS-DP-00882) and no problems were noted. Training was verified and found to be adequate. Instrumentation was examined, calibrations checked, drum age criteria verified, laboratory notebooks audited, and standards verified.

RFETS does not use the direct canister sampling method and does not collect samples by breaching the drum lid. These techniques were not audited and are not approved for use by RFETS. RFETS does not ship HSG samples off-site.

Many of the questions on the B6-4 checklist involve the techniques, handling, and quality controls associated with sampling. Equipment is controlled to ensure that it does not contaminate the sample.

Sample collection is assessed by collecting QC samples and evaluating sample data against specific quality assurance objectives (QAOs). Sampling QAOs are assessed after the QC samples are analyzed and documented in the analytical batch data report.

The processes used to clean, leak-check, and maintain sampling equipment were evaluated and determined to adequately meet WAP requirements. Copies of pages from the field records are located in the batch data reports included in Attachment 3. Review of the batch data reports showed that compliance with the WIPP WAP requirements and with RFETS plans and procedures has been successfully implemented in both the technical and QA areas. The batch data reports that serve as objective evidence for implementation of some activities of the B6-4 checklist are included in Attachment 3.

No conditions adverse to quality were noted in this area during the audit. No CDAs, Observations, or Recommendations resulted from this area of the audit.

The audit team concluded that the HSG sampling and analysis process at RFETS is satisfactorily implemented and effective.

#### 5.2.5 Table B6-5 Radiography Checklist

This audit was performed to assess the ability of RFETS to characterize Summary Category Groups S3000, S4000, and S5000 waste streams. RFETS radiography operations were performed using two RTR systems located in Building 664 and a mobile unit. These units can provide imaging of both drums and boxes. They have controls to allow the operator to enhance the image quality of the radiograph, annotate the videotape with text, provide narration with video, rotate the drum as it is imaged, enlarge the image, and pan up and down the container. These systems allow site personnel to view drums and boxes while recording the examination on audio/videotape.

The Table B6-5 radiography checklist was completed by assessing Operating Procedures 4-W30-NDT-00664, *RTR Testing of Transuranic and Low-Level Waste in Building 664*, and PRO-1520-Mobile-RTR, *Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste*. Videotapes of the operations were reviewed, and the resulting documentation was evaluated. Batch data reports 6T-2173, MT0022, MT0041, MT0056 and 6T-2155 are included in Attachment 3. Training course material and the RTR test drum evaluations were reviewed for adequacy.

A walk-through of the RTR process was performed in Building 664 and the mobile unit. Batch data reports and RTR videotapes were selected and reviewed to evaluate RTR process documentation.

Radiography equipment maintenance and daily checks were evaluated in accordance with the WAP requirements, as described in the two RTR procedures. These were found to be satisfactory. Radiography results are properly reported on standard forms and are adequately reviewed, as required by the WAP. Copies of the forms are included in the batch data reports in Attachment 3.

No conditions adverse to quality were noted in this area during the audit. No Observations or Recommendations were provided to RFETS management.



The audit team concluded that radiography processes are adequate, satisfactorily implemented, and the process is effective.

#### 5.2.6 Table B6-6 Visual Examination Checklist

This audit was performed to assess the ability of RFETS to characterize Summary Category Groups S3000, S4000, and S5000 waste streams. Visual examination (VE) includes both the QC check performed on radiography results and observations made during initial waste packaging and repackaging. RFETS was audited to determine the effectiveness of VE as the QC check on RTR. VE activities performed to verify radiography are recorded on audio/videotape and documented on standard forms.

RFETS VE activities were evaluated by interviewing personnel, reviewing videotapes, and evaluating VE batch data reports VE-2004-001, VE-2004-002, and VE-2004-003. These batch data reports are included in Attachment 3.

The VE procedures are PRO-1608-VECRTR-371, *RTR Visual Examination Confirmation, Building 371*, PRO-1471-VE-771, *Visual Examination for the Confirmation of RTR*, and PRO-1358-440-VERP, *Glovebox and C-Cell Waste Operations*. The procedures were found to be adequate in meeting WAP requirements.

The random selection procedure, PRO-945-WIPP-009, *RCRA Characterization of TRU Waste to be Disposed of at WIPP*, which is used to select drums to confirm radiography results, was audited. Procedure PRO-940-WIPP-010, *WIPP TRU Waste Characterization Project Level Data Review and Reporting*, used to determine the miscertification rate for the site, was also assessed.

The training course content for operators and VE experts was reviewed to verify that all WAP requirements were captured in the course. The course material is included in Attachment 3. No deficiencies were noted in this area.

No conditions adverse to quality were noted in this area during the audit. No Observations or Recommendations were provided to RFETS management.

The audit team concluded that RFETS VE processes are adequate, satisfactorily implemented, and effective.

### **5.3 General**

#### 5.3.1 Results of Previous Audits

The Observations and CARs resulting from the last CBFO recertification audit (A-03-03) were examined to determine if the conditions had been corrected. There was no indication of a recurrence of any of the previously identified deficiencies.

#### 5.3.2 Changes in Programs or Operations

The HWFP portions of the audit were performed to the latest B6 checklists, which incorporate all Class 1, Class 2, and Class 3 modifications to the HWFP.

### 5.3.3 New Programs or Activities Being Implemented

CBFO Audit A-03-02 (new VE Facility Building 371), CBFO Audit A-03-04 (new VE Facility Building 440 and solid sampling of tank sludges), and CBFO Audit A-03-22 (two new sampling processes: polymerized waste sampling and small container waste sampling) have been approved since the last recertification audit. CBFO Audit A-04-08 (removal of soil [S4000 soils/gravels] from Intermodal containers and placement into small containers [Vollrath cans] for subsequent sampling) was awaiting approval by NMED at the time of the audit.

### 5.3.4 Changes in Key Personnel

RFETS has not changed any key personnel since the last HWFP recertification audit (A-03-03). RFETS has added alternate key personnel to support increased characterization and certification activities.

## **6.0 SUMMARY OF DEFICIENCIES**

### **6.1 Corrective Action Reports**

During the audit, the audit team may identify Conditions Adverse to Quality (CAQ) and document such conditions on CARs.

Condition Adverse to Quality (CAQ) – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.

Significant Condition Adverse to Quality – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the Quality Assurance (QA) program.

No CARs were initiated during the audit.

### **6.2 Deficiencies Corrected During the Audit**

During the audit, the audit team may identify CAQs. The audit team members and the Audit Team Leader (ATL) evaluate the CAQs to determine if they are significant using the following definitions:

*CAQ – Term used in reference to failures, malfunctions, deficiencies, defective items, and nonconformances.*

*Significant CAQ – A condition which, if uncorrected, could have a serious effect on safety, operability, waste confinement, TRU waste site certification, compliance demonstration, or the effective implementation of the QA program.*

Once a determination is made that the CAQ is not significant, the audit team member, in conjunction with the ATL, determines if the CAQ is an isolated case requiring only remedial action and therefore can be corrected during the audit (CDA). Upon

determination that the CAQ is isolated, the audit team member, in conjunction with the ATL, evaluates/verifies any objective evidence/actions submitted or taken by the audited organization and determines if the condition was corrected in an acceptable manner. Once it has been determined that the CAQ has been corrected, the ATL categorizes the condition as a CDA according to the definition below.

*CDAs – Isolated deficiencies that do not require a root cause determination or actions to preclude recurrence. Correction of the deficiency can be verified prior to the end of the audit. Examples include one or two minor changes required to correct a procedure (isolated), one or two forms not signed or not dated (isolated), and one or two individuals that have not completed a reading assignment.*

#### **CDA 1**

RFETS packaged two Pu/Be sealed sources in an SWB (S03171). The shielding calculation for the SWB required the source to be centered in the SWB to comply with the 200 mR/hr limit on the payload container surface. The TRAMPAC does not allow internal shielding to be used to meet this limit, except for pipe overpack components. Relying on the internal bracing is not allowed by the TRAMPAC.

RFETS issued NCR 04-0489 to prevent the container from being shipped until a satisfactory shielding analysis is performed or the package is reworked. This was the only package of its type and is therefore an isolated occurrence.

#### **CDA 2**

There are inconsistencies in the AK record for soils regarding when the drums on Pad 903 began leaking and the list of hazardous constituents. These should be resolved through discrepancy resolution and/or clarification of the language in the AK Summary.

A memo was issued identifying AK discrepancies associated with drum leakage date/information, radioactive Contaminants of Concern and chemical Contaminants of Concern. Based on the review of these sources, it was determined that the hazardous waste characterization and assignment of EPA Waste Codes F001, F002, and F005 appropriately addressed the constituents identified by the AK Source Documents. Clarifications will be made in the AK Summary. It was also noted that the discrepancy in the date leakage began had no impact on the assignment of hazardous waste codes or other significant WAP-required information. The earlier date is well documented in several sources and assumed to be correct.

### **7.0 SUMMARY OF OBSERVATIONS AND RECOMMENDATIONS**

During the audit, the audit team may identify potential problems or suggestions for improvement that should be communicated to the audited organization. The audit team member, in conjunction with the ATL, evaluates these conditions and classifies them as Observations or Recommendations using the following definitions:

*Observation – A condition that, if not controlled, could result in a CAQ.*

*Recommendations – Suggestions that are directed toward identifying opportunities for improvement and enhancing methods of implementing requirements.*

Once a determination is made, the audit team member, in conjunction with the ATL, categorizes the condition appropriately.

## **7.1 Observations**

The following Observation was provided to RFETS management.

### **Observation 1**

RFETS AK Summaries indicate that Cs-137 and Sr-90 are not expected radionuclides in the RFETS waste. At INEEL, CS-137 was detected in RFETS Building 774 sludge and the AK (at INEEL) was modified to indicate that Cs-137 is expected in RFETS waste. This inconsistency needs to be resolved.

## **7.2 Recommendations**

The WAP-related Recommendation provided to RFETS management during the audit is described below.

### **Recommendation 1**

The AK Summary does not include some information listed in supporting documents that should be included. It is recommended that the following items be addressed:

- The AK Summary (AKS) for the 903 Pad soils indicates that the same weapons-grade plutonium isotopic mix, etc., as presented in the 018 Supplemental AK document and which applies to other waste generated at RFETS, also applies to the 903 Pad waste. The 018 Supplemental AK document states that a facility manufacturing process change occurred in 1957/1958; drums on the 903 Pad were placed there prior to 1958. Therefore, without further clarification in the AK summary, this may imply that the currently used radiological information may not apply to material on the 903 Pad. Simple clarification in the AKS is warranted.
- The AK Expert (AKE) indicated that although both uranium- and plutonium-bearing drums were placed on the 903 Pad, only those containing plutonium appear to have leaked (based on recent RI/RFI data), due potentially to CCl<sub>4</sub>-Pu radiolysis and subsequent corrosion. A statement regarding the plutonium content in the soils based on AK sampling data should be included.
- AK supplemental data indicate the quantity of plutonium in soils/sludges associated with the 903 drums. This information should be rolled up into the AKS.
- The AKE appears quite knowledgeable regarding historic plutonium/uranium operations in place during generation of wastes emplaced on the 903 Pad. Supplemental documents do not include much historical information, but these types of data (e.g., buildings in which 903 oils were generated, uranium vs.

plutonium) should be included in the AKS (discussed in a memo to file that would be included as an AK source document).

## **8.0 LIST OF ATTACHMENTS**

Attachment 1: Personnel Contacted During the Audit and the List of Documents Audited

Attachment 2: Corrective Action Supporting Documentation

Attachment 3: Objective Evidence

Attachment 4: Audited RFETS Implementing Procedures

## ATTACHMENT 1 PERSONNEL CONTACTED DURING THE AUDIT

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Anglim, Cliff M.	SOM; Manager, DC	X	X	X
Armour, Faith	SOM; Records Specialist	X	X	
Arnold, Pat	MS; TWCP			X
Ballenger, Roger J.	TRU Program; TRU Waste Manager		X	X
Brugh, Mark	B559 Labs; Manager-Lab	X	X	
Burmeister, Mark	RISS- 903 Pad Project; Technical Supervisor	X	X	
Carpenter, Steve	MS; TRU WCO		X	
Chavez, Rickie	MS; HRT		X	
Ciucci, John	MS; Waste Ops	X		X
Crawford, Brenda	Measurements; Admin Support		X	
D'Amico, Eric	KH; TRU Program Engineer	X	X	X
Dahl, David	MS; QA/QE	X	X	
Daniels, Kevin	MS; ESH&Q Manager			X
Doolittle, Brenda	NDA; Operator		X	
Dreher, David	KH; NDA OPS MGR	X	X	X
Dunkel, Robert D.	Traffic Mgmt; Sr. Spec		X	
Durel, F. M.	KH; Measurements		X	
Edmiston, Douglas	MS; GGT MGR	X	X	
Edrich, Pam	Waste Systems (WEMS & WSRIC); Tech Manager		X	

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Engholm, Eric	MS; HRT		X	
Englemann, Gislinde	Cal-Gamma; Chemist		X	
Erickson, David S.	MS; Gas Gen Supervisor		X	
Farris, Thomas	NDA; Database Administrator		X	
Ferrera, Carol	KH; TWCP PQAO	X	X	X
Fisher, Doug	B371 Operations; SME		X	
Floyd, David	MSWO; Headspace Tech Support		X	
Geis, J. A. (Art)	KH; Site QA Program Manager	X	X	
Gillespie, Doyle	KH Quality Program; QA Engineer	X	X	
Goldsby, Tom	NDA Technical Supervisor		X	
Gorman, Lee	WRG; Wst Req Rep		X	
Grady, Frank	TRU Programs; TRU Waste Engineer	X	X	X
Green, Lonnie	MS; HRT		X	
Guyn, Terry	PEQA; QA Engineer		X	
Hale, Theresa.	MS; Supervisor		X	
Harrison, Jeff	Wastren; AKE	X	X	
Hart, Neil	KH; NDT Tech		X	
Heim, Robert R.	PEQA/PQA; Procurement Quality Engineer		X	
Hicks; David Alan	DOE/RFPO; TRU and LLW Project Lead	X		X

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Hodgson, Rick E.	NDA; Technical Supervisor		X	
Johnson, Micky	Wastren; Sr Prin Eng	X	X	X
Kachun, Mark S.	MSQA; Waste Inspection Technical Lead		X	
Kirk, Nancy	MSQA; Assessor	X	X	X
Kirschenmann, Harley	SMQA; Manager	X	X	X
Kocsis, Frank	SOM; Program Manager	X	X	X
Lenarcic; Ken	Traffic/Transportation; Traffic Manager	X	X	X
Lewis, Leslie	TRU Waste Program; TRUPACT-II SME	X	X	
Long, Jerry W.	MS; Deputy PM	X		X
Longan, Peggy	MS; Compl. Tracking		X	
Mack, Lynn	TRU Programs; Scientist		X	
Major, Austin	NDA; Operator		X	
Mattson, Marty	Edison ESI/Metrology; Data Administrator		X	
McCarthy, Edward	Operations Manager Bldg. 440	X	X	X
McElhaney, S. A.	MS; Measurements Manager		X	X
McGrory, Mark S.	RISS; Manager TRU Repack	X		X
McKinney, Ruth	Source One; Exec VP	X	X	X
Medina, Anthony	MS; Safety Manager	X		
Melberg, Tim	PEQA; Manager	X	X	
Melick, George	KH; NDT Tech		X	



RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Mensik, Mark	QAO- HSGS	X	X	X
Michaud, Paul	MS ESH&Q; Management Assessment Coordinator		X	
Moody, David W.	TRU; SME		X	X
Moore, Timothy	MS; Headspace Supervisor		X	
Nielsen, Natalie	Records Spec/WRC		X	
Nolan, Thomas C.	LATA/Rad Lab; Chemist		X	
O'Leary, Jerry	KH/TRU Waste Project Manager	X	X	X
Owens, Michael G.	Procurement Programs; Manager		X	
Papp, Michael J.	WSRIC; Backlog Program Lead		X	
Peterson, Ruth	RFCSS; Transportation Specialist		X	
Philips, Karen	RF/TRU Program; TRU Sampling SME		X	X
Pigeon, Paul	MS/Training Programs; TWCP Training Officer	X	X	X
Pless, Karen	RFCSS; Secretary		X	X
Podolsky, Stewart	RISS; QA Lead	X	X	
Renslow, J. A.	KH; NDT Tech		X	
Rivera, Mike	TRU Program; Gas Gen	X	X	
Robledo, Ron	TRU Programs; Engineer	X	X	
Rodgers, Alan	KH/Deputy Material Stewardship	X		

RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10				
NAME	ORG/TITLE	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST-AUDIT MEETING
Roth Jr., John	061 Warehouse; Crew Leader		X	
Rouse, Sue	MS TRU Waste; Tech Writer		X	
Santangelo, Debra	MS; HRT		X	
Sayler, Cheryl	WC&O; WNCR Coordinator		X	
Schoen, Jim	Waste Systems; WSRIC Program Lead		X	
Sendelweck, Vivian	Wastren; AKE	X	X	X
Sisk, Susan	MSQA; QA Engineer		X	X
Slottke, Ronald J.	KH; PCMT Systems Manager	X		
Smart, Kim	KH/IRM; Manager	X	X	X
Smith, Dan	PEQA; Compliance Specialist (Source Insp.)		X	
Smith, Scott	Wastren; AKE	X	X	X
Spears, Mark	KH; VP/Project Manager			X
Stewart, Judith	Measurements; NDA WIPP Coordinator	X	X	X
Straub, Elizabeth	Procurement; Procurement Agent		X	
Stunson, Ernie	Edison ESI/Metrology; Project Mgt		X	
Tallman, Steve	RFCSS; NDT Manager		X	
Tressell, John	MSQA; TRU Waste QA, PQAQO Alternate	X	X	X
Trivett, Airrus	ICT; QA Manager	X	X	X
Turner, Charles A.	MS; Headspace Manager	X	X	X

**RFETS PERSONNEL CONTACTED DURING AUDIT A-04-10**

<b>NAME</b>	<b>ORG/TITLE</b>	<b>PREAUDIT MEETING</b>	<b>CONTACTED DURING AUDIT</b>	<b>POST- AUDIT MEETING</b>
Wilson, Jeff D.	Waste Systems; WEMS Administrator		X	
Wolfe, Mike	SOM; Waste Records Center Manager	X	X	X

### Personnel Contacted During the Audit by Area

Nonconformance/Corrective Action	Carol Ferrera John Tressell Cheryl Saylor Doyle Gillespie
Personnel Qualification and Training	Paul Pigeon
Documents and Records	Faith Armour Frank Kocsis Doyle Gillespie Susan Sisk Kim Smart Mike Wolfe Ruth McKinney Cliff Anglim
Sample Control	Mark Brugh Stewart Podolsky
Soils/Solids Sampling	Roger Ballenger Doug Fisher Karen Phillips
Soils/Solids Analysis	Mark Brugh Stewart Podolsky
Acceptable Knowledge	Jeff Harrison Vivian Sendelweck Roger Ballenger Micky Johnson Scott Smith Mark Burmeister Carol Ferrera
Headspace Gas Sampling and Analysis	Charles Turner Ed McCarthy Mark Mensik Timothy Moore Peggy Longan David Floyd
Real-Time Radiography	Jack Renslow George Melick Frank Grady Steve Tallman Neil Hart
Visual Examination	Ron Robledo Frank Grady Roger Ballenger Lee Gorman
WWIS	Ron Robledo Eric D'Amico
Verification and Validation	David Moody Mark Mensik John Tressell

<b>RFETS DOCUMENTS AUDITED FOR A-04-10</b>		
<b>No.</b>	<b>Procedure Number</b>	<b>Title</b>
1.	PRO-484-WIPP-003, V6	Collection, Review, and Confirmation of Acceptable Knowledge
2.	RMRS-WIPP-98-100, R44	Acceptable Knowledge TRU/TRM Waste Stream Summaries
3.	RF/RMRS-97-018, R10	RF/RMRS Waste Acceptable Knowledge Supplemental Information
4.	1-C80-WO-1102-W/RT, V6	Waste/Residue Traveler instructions
5.	PRO-543-ASD-002, R3	Initiation, Preparation, and Implementation of COC Forms
6.	PRO-908-ASD-004, V3	On-Site Transfer and Off-Site Shipment of Samples
7.	5-NDT-TC-1A, V3	Training, Qualification, and Certification of Nondestructive Testing Personnel
8.	4-K47-WEM-WP1210, R4	WEMS Offsite Shipping Module
9.	4-W30-NDT-00664, V9	RTR Testing of Transuranic and Low-Level Waste in Building 664
10.	L-1000-U	Requirements for Radiological Laboratories L-Procedures
11.	PRO-815-DM-01, V2	Developing and Maintaining Documents
12.	L-4026-M	Records Handling, Storage & Retrieval
13.	PRO-767-WIPP-001, R03	Waste Records Center Processing
14.	1-PRO-079-WGI-001, R4	Waste Characterization, Generation, and Packaging
15.	4-H19-WSRIC-001, R7	WSRIC Characterization and Reverification
16.	95-WP/SAP-001, V11	Transuranic (TRU/TRM) Waste Sampling Plan
17.	PRO-943-WIPP-007, R4	TRU Waste Characterization Program Trending and Analysis of Quality – Affecting Problems
18.	1-A65-ADM-15.01, R6	Control of Nonconforming Items
19.	PRO-U76-WC-4030, R3	Control of Waste Nonconformances
20.	PLN-97-007, V12	TRU Waste Characterization Program Training Implementation Plan
21.	PRO-264-RS-0141, R5	Data Review and Verification of Residue Repack Batch Reports
22.	PRO-544-SALT REPACK-371, R5	Residue Repack, Building 371
23.	PRO-603-RS-0152, R2	Data Review and Verification of Solid Sampling Batch Reports
24.	PRO-860-RS-0156, R1	Solid Sampling, Building 371
25.	RS-012-004, V4	Grid Method – Solid Sampling and Analysis Plan
26.	RS-012-005, R3	Cone & Quartering Method –Solid Sampling and Analysis Plan
27.	1-M12-WO-4034, V10	Solid Radioactive Waste Packaging Requirements Manual
28.	4-D99-WO-1100, V12	Solid Radioactive Waste Packaging Procedure
29.	PRO-1018-SWB-371, R0	Standard Waste Box Drum Selection and Grouping
30.	PRO-1031-WIPP-1112, V3	TRU/TRM Waste Visual Verification (V2) and Data Review
31.	PRO-1411-WO-WASTE, V9	Receiving, Transfer & Handling of Waste, Sources & Standards
32.	PRO-1471-VE-771, R0	Visual Examination for Confirmation of RTR

## RFETS DOCUMENTS AUDITED FOR A-04-10

No.	Procedure Number	Title
33.	PRO-284-POC-001, R3	Pipe Overpack Components Initial Assembly Process
34.	PRO-823-REPACK-371, R1	Combustible Residue Repackaging
35.	PRO-830-DRUM-371, R0	Drum Loading into Standard Waste Boxes
36.	PRO-W90-FO-0103, R1	Balances
37.	L-1006-F	Maintenance Records for analytical Instrumentation
38.	L-4035-N	Metals Data Verification and Validation Data Generation Level
39.	L-4038-G	WIPP Data Review and Validation for Volatile Organic Compounds
40.	L-4039-I	WIPP Data Review and Validation for Semi-Volatile Organic Compounds in Solid Samples
41.	L-4150-J	Total Metals Acid Digestion Procedure of Solid, Liquid, and TCLP Extract Samples
42.	L-4151-L	Waste Analysis by Atomic Absorption Spectroscopy
43.	L-4152-L	Mercury Analysis in Waste (Cold-Vapor Technique)
44.	L-4153-J	Trace Metals by ICP Spectrometry
45.	L-4165-M	GC/MS Determination of Volatile Organic Compounds (Solids, Liquids, and TCLP Extracts)
46.	L-4214-F	Extraction of Total SVOCs for GC/MS Analysis for WIPP
47.	L-4215-F	GC/MS Determination of Total SVOCs for WIPP
48.	ASD-003, R2	Identification System for Reports and Samples
49.	PRO-1351-440-SWB, V4	Room 113 Perma-Con Operations
50.	PRO-944-WIPP-008, V4	Completion of Waste Stream Profile Form for Waste to be Disposed of at WIPP
51.	PRO-945-WIPP-009, R6	RCRA Characterization of TRU Waste to be Disposed of at WIPP
52.	PRO-940-WIPP-010, V20	WIPP TRU Waste Characterization Project Level Data Review and Reporting
53.	4-F72-WEM-WP1205, R5	WEMS and WSRIC Software Quality Assurance Compliance
54.	L-4052-A, R1	Headspace Gas Sampling and Analysis Using an Automated Manifold Qualification Plan and Test
55.	L-4217-C	Metals Analysis Data Compilation and Reporting
56.	PRO-1265-SS-001, V3	Building 774 and Tank T-207 Aqueous Sludge Removal and Characterization Plan
57.	PRO-1266-SS-002, R0	Tank Sludge Removal from Pre-Selected Areas, Building 774
58.	PRO-1358-440-VERP, V6	Glovebox and C-Cell Waste Operations
59.	PRO-1569-SAP-001, V2	Polymerized Organic and Inorganic Liquid Process – Sampling and Analysis Plan
60.	PRO-1585-PWS-440, R0	Polymerized Waste Sampling – Building 440
61.	PRO-1618-PLP-001, R1	Data Review and verification of Solid Sampling Batch Data Reports – TRU Projects
62.	PRO-1623-SCWS-440, R1	Small Container Waste Sampling – TRU Projects
63.	PRO-1669-HGAS-V&V, R0	Headspace Gas V&V (Data Generator Level)
64.	PRO-1674-Source/Standard-Load/Unload, R0	Source/Standards Loading and Unloading In Matrix Containers in Buildings 440 and 664

RFETS DOCUMENTS AUDITED FOR A-04-10		
No.	Procedure Number	Title
65.	PRO-1676-HGAS-S&A, V1	Headspace Gas Sampling and Analysis using an On-Line Integrated System
66.	L-4108-G	Toxicity Characteristic Leaching Procedure (TCLP) for Metals in Waste
67.	PRO-1608-VECRTR-371, R0	RTR Visual Examination Confirmation, Building 371
68.	PRO-1628-A2-001, R0	Tank Sludge Removal from PreSelected Areas, Tank T-207
69.	PRO-1729-903-SOIL, R0	Soil Removal from Pre-Selected Areas, 903 Pad
70.	PRO-1730-903-001, R0	903 Pad Removal/Repack and Characterization Plan
71.	PRO-1520-Mobile-RTR, V3	Mobile Real-Time Radiography Testing of Transuranic and Low-Level Waste
72.	RS-020-012, R2	Ash Residue Repack, Process Control Plan
73.	RS-020-013, R2	Dry Residue Repackaging Process Control Plan
74.	RS-020-018, R1	Combustible Residue Repackaging Process Control Plan
75.	RS-020-021, R1	Salt Residue Repack, Buildings 371 and 707 Process Control Plan
76.	PRO-717-HDGAS-S&A, R1	Headspace Gas Sampling, Building 371
77.	95-QAPjP-0050, V9	RFETS TRU Waste Characterization Program Quality Assurance Project Plan
78.	1-MAN-008-WM-001, V7	Transuranic (TRU) Waste Management Manual
79.	PRO-604-RC-001, R2	Field Sample QC Data Calculations, Review, and Validation Batch Reports
<u>79.80.</u>	<u>PRO-077-WIPP-005, R2</u>	<u>Management of Waste Information Prior to Transmittal to the Waste Records Center</u>
<u>79.81.</u>	<u>1-MAN-039-WEM-WP-1200, R1</u>	<u>Waste and Environmental Management System (WEMS) Program Management Manual</u>
<u>79.82.</u>	<u>4-G83-WEM-WP-1209, V9</u>	<u>WEMS Waste Package Verification and Certification</u>
<u>79.83.</u>	<u>1-V41-RM-001, R2</u>	<u>Records Management Manual</u>
<u>79.84.</u>	<u>PRO-X05-WC-4018, R5</u>	<u>Transuranic (TRU) Waste Certification</u>
<u>79.85.</u>	<u>PRO-T43-Traffic-528, V2</u>	<u>TRUPACT II Operations</u>
<u>79.86.</u>	<u>L-4028-Q</u>	<u>Sample Administration for the Radiological Laboratories</u>